

## **DETAILED ACTION**

### ***Status of the Application***

- [1]** Claims 1, 7-9, 11, and 21-22 are pending in the application.
- [2]** Applicant's amendment to the specification, filed on 2/20/08, is acknowledged.

### ***Election/Restriction***

**[3]** In the restriction requirement set forth in the Office action mailed on 2/7/05, the restriction of the claims of Groups I, II, and III was based on fragments derived from subdomain I, II, or III of HCV NS3 helicase. Since SEQ ID NO:5 and 6 of the claims are derived from subdomain I AND subdomain II or III, the restriction requirement between Groups I, II, and III as set forth in the restriction requirement mailed on 2/7/05 is withdrawn.

**[4]** In view of the above noted withdrawal of the restriction requirement, applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

### ***Examiner's Amendment to the Claims***

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**[5]** An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ms. Melodie W. Henderson on 7/18/08.

**[6]** The application has been amended as follows:

- Claim 9. Insert "of SEQ ID NO:3, SEQ ID NO:5, or SEQ ID NO:6, respectively" after "Arg 81".
- Claim 11. Replace the phrase: "A composition, comprising a protein crystal of SEQ ID NO:17, wherein the crystal has space group P21" with "A composition comprising a crystal of a protein consisting of SEQ ID NO:17, wherein the crystal has space group P2<sub>1</sub>".
- Claim 21. Insert "of SEQ ID NO:3, SEQ ID NO:5, or SEQ ID NO:6, respectively" after "Asp 73 or Arg 81".
- Claim 22. Insert "of SEQ ID NO:5" after "255-258".

### ***Reasons for Allowance***

**[7]** The following is an Examiner's statement of reasons for allowance. Initially, it is noted that all references to pages of the specification refer to the substitute specification filed on 12/14/05. Also, it is noted that the specification's amino acid numbering is relative to the full-length HCV NS3 helicase of SEQ ID NO:1.

According to the specification, the polypeptides having the amino acid sequences of SEQ ID NO:3, 5, 6, and 17 are modified fragments of HCV NS3 helicase, wherein the fragments are disclosed as being advantageously soluble such that they are useful for

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crystallographic studies and relatively small such that they are useful for NMR-based drug discovery techniques (specification at p. 4, lines 15-31).

Claims 1 and 7-8 are drawn to a non-crystalline polypeptide consisting of SEQ ID NO: 5 or 6. Claims 9 and 21 are drawn to a non-crystalline polypeptide consisting of SEQ ID NO:3, 5, or 6, except Asp73 or Arg81 is replaced with a non-polar amino acid (claim 9) OR except Asp73 is replaced with Lys or Arg or Arg81 is replaced with Glu or Asp (claim 21). Claim 11 is drawn to a composition comprising a crystal of a protein consisting of SEQ ID NO:17 having a space group and unit cell dimensions as set forth in the claim. Claim 22 is drawn to a non-crystalline polypeptide consisting of SEQ ID NO:5, except amino acids 255-258 are replaced with the tetrapeptide sequences of SEQ ID NO:7, 8, 9, 10, 11, 12, 13, or 14 as described at p. 6, lines 24-27 and p. 12, lines 14-30 of the specification.

In this case, the examiner can find no teaching in the prior art of record of the polypeptide of claims 1, 7-9, and 21-22 and the crystal of claim 11. Therefore, claims 1, 7-9, 11, and 21-22, drawn to polypeptides and a composition as encompassed by the claims, are allowable over the prior art of record.

**[8]** Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Steadman whose telephone number is 571-272-0942. The examiner can normally be reached on Mon to Fri, 7:30 am to 4:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathleen Kerr Bragdon can be reached on 571-272-0931. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/David J. Steadman/  
David J. Steadman, Ph.D.  
Primary Examiner  
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